

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/RU 2003/000511	International filing date (<i>day/month/year</i>) 20 November 2003 (20.11.2003)	Priority date (<i>day/month/year</i>)
International Patent Classification (IPC) or national classification and IPC 7 B31D 3/00, E04C 2/32		
Applicant OTKRYTOE AKTSIONERNOE OBSHESTVO "KAZANSKY NAUCHNO-ISSLEDOVATELSKY INSTITUT AVIATIONNOI TEKHNologii" et al.		

- This report is the international preliminary examination report, established by the International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 3 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☐ (*sent to the applicant and to the International Bureau*) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of the report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ Sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 18 October 2005 (18.10.2005)	Date of completion of this report 24 April 2006 (24.04.2006)
Name and mailing address of the IPEA/RU FIPS Russia, 123995, Moscow, G-59, GSP-5, Berezhkovskaya nab., 30-1 Facsimile No.	Authorized officer A. Kondratiev Telephone No. 240-25-91

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/RU 2003/000511

Box No. I Basis of the opinion

1. With regard to the **language**, this report is based on:

- ☐ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed.")*:

3. ☒ the international application as originally filed/furnished

☐ the description:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the claims:

pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the drawings:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims. Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to the sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims. Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to the sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded".

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/RU 2003/000511**Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-2	YES
	Claims		NO
Inventive Step (IS)	Claims	1-2	YES
	Claims		NO
Industrial Applicability (IA)	Claims	1-2	YES
	Claims		NO

2. Citations and explanations (Rule 70.7):

The following documents are referred to in this report:

D1: EP 0400424 A

D2: EP 1025983 A

D3: US 5028474 A

D4: GB 2123874 A.

D2 represents the closest prior art for the claimed invention.

D2 (see par. 4, 19, 21, 27) discloses a method for the production of a curvilinear folded structure including bending the sheet blank along the bending lines to form 3D relief structures based on zigzag crimps, bending the blank and then putting the structure into the shape of arch by thermal treatment.

The method according to claim 1 differs from that disclosed in D1 in that it additionally includes folding the blank to join the obtained folded structure plane block ridges, putting the structure into the shape of arch by applying shear stresses providing the curvature radius in its lateral section defined by the given curvilinear folded structure design parameters, thermally treating the structure in such conditions for inner stresses relief in the folded structure material and stretching to the given design parameters.

These distinctions provide the extension of technological capabilities of the blank corrugating.

The documents D1, D3, D4 disclose methods for the production of a curvilinear folded structure including an operation of bending the sheet blank along the bending lines to form 3D relief structures based on zigzag crimps and putting the structure into the shape of arch.

Hence, the prior art documents do not disclose the above-mentioned distinctive features.

Consequently, claims 1-2 meet the criteria of novelty and inventive step.